

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPELLANT: Lawrence Wilcock	<div style="border: 1px solid black; padding: 10px; text-align: center;">CERTIFICATE OF DEPOSIT DATE OF DEPOSIT: December 2, 2009 I hereby certify that this paper or fee (along with any paper or fee referred to as being attached or enclosed) is being electronically deposited using EFS Web with the United States Patent Office on the date indicated above. /Steve M. Perry/ Steve M. Perry</div>
SERIAL NO.: 10/058,045	
FILED: January 29, 2002	
CONFRM. NO.: 3640	
FOR: AUDIO USER INTERFACE WITH AUDIO CURSOR	
ART UNIT: 2614	
EXAMINER: Daniel R. Sellers	
DOCKET NO: 30011906-3	

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REPLY BRIEF

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Mail Stop Appeal Brief – Patents

Sir:

Appellants submit this Reply Brief in response to the Examiner's Answer mailed October 6, 2009 in connection with their appeal from the non-final rejection of the Patent Office, mailed March 6, 2009, in the above-identified application. A Notice of Appeal was filed on June 6, 2009.

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I. STATUS OF CLAIMS

No claims are allowed.

Claims 1-8 and 10-46 are pending.

Claim 9 is canceled.

Claims 1-3, 5, 6, 8, 13-15, 17, 19-25, 29-31, 33, 35-41, 45 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Slezak, US 6,647,119, and Cragun, US 5,461,399. Claims 4, 7, 11, 18, 27, 34 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Slezak and Cragun as applied to claim 2, and further in view of Balabanovic, US 6,624,826. Claims 10, 26 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Slezak and Cragun as applied to claim 1 above, and further in view of McKiel, Jr., US 5,374,924. Claims 12, 28 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Slezak and Cragun as applied to claim 1 above, and further in view of Rohen, US 5,186,629. Claims 16 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Slezak and Cragun as applied to claim 15 above, and further in view of a prior art publication, "Signal Processing, Acoustics, and Psychoacoustics for High Quality Desktop Audio" by Kyriakakis et al.

Claims 1-8 and 10-46 are appealed.

II. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

The issues presented for review are:

A. Whether claims 1-3, 5, 6, 8, 13-15, 17, 19-25, 29-31, 33, 35-41, 45 and 46 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Slezak in view of Cragun.

B. Whether claims 4, 7, 11, 18, 27, 34 and 43 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Slezak and Cragun and further in view of Balabanovic.

C. Whether claims 10, 26 and 42 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Slezak and Cragun and further in view of Rohen.

D. Whether claims 16 and 32 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Slezak and Cragun and further in view of Kyriakakis.

III. RESPONSE TO EXAMINER'S ANSWER

A. Re: Claims 1, 21, and 37

The Examiner's Answer states that the motivation for combining Cragun and Slezak is to enhance the usability of a data processing system for visually impaired users. The Examiner's Answer fails to describe in what way usability is enhanced by combining Cragun and Slezak and thus has failed to describe a motivation for combining the references.

Furthermore, Appellant asserts that it is not obvious to combine Cragun and Slezak. Slezak teaches to use a graphical representation where simulated sounds are generated by movement in the graphical representation. In particular, Slezak uses sound to enhance a graphical interface experience for applications such as video games. Cragun discloses a system for assisting visually impaired users to graphically select displayed objects. In other words, Cragun teaches that audio signals are used to distinguish among graphical objects. One having ordinary skill in the art would not be motivated to combine a graphical system enhanced by sound cues as in Slezak with a sound system used to operate a graphical system as in Cragun because of the vast and disparate differences between audio and graphical systems in general and because of the specific details of the Slezak and Cragun devices in particular. In Slezak, a user views and uses the graphical interface to interact with sounds and in Cragun a visually impaired user cannot view the graphical interface and must use sounds to interact with the graphical user interface. A system which relies on a user's ability to view a graphical interface would not be useful in combination with a system for visually impaired users who cannot see the graphical interface. For example, the stated reasoning of Slezak in using sound

cues to draw a user's attention to the general location of the cursor is to assist a user in visually locating the cursor. Such a feature is useless in Cragun because the users of the Cragun device are unable to visually locate the cursor.

As a final point regarding the combination of Cragun and Slezak, Applicant notes that both Cragun and Slezak **require** a graphical display for interaction with sounds. The current application does not require a graphical display, but instead uses an audio field with an audio cursor and objects represented by sounds. Thus, Cragun and Slezak **cannot** be combined to reach the elements of the present claims.

Appellant further asserts that a combination of Cragun with Slezak fails to result in the claimed elements in the present application. Slezak fails to describe a synthesized sound representing a cursor which is moved in an audio field. The cited section of Slezak describes that sound can be used to draw attention of the user toward the cursor representation. However, Slezak fails to describe movement of the sound used to draw attention of the user. Slezak also fails to describe a distinctive cursor sound. Cragun fails to overcome these deficiencies.

B. Re: Slezak Figures

As has been described above, Slezak fails to disclose a sound source representing an audio cursor. Furthermore, though the background of Cragun describes sounds which change in response to cursor movement, Cragun fails to disclose a sound source representing an audio cursor. Any sounds generated by the system described in the background of Cragun may be useful in determining a relative cursor position from one pixel to the next. However, the Cragun sounds are not an audio cursor, do not change

when an item-representing sound source is approached, and cannot be used to navigate an audio field. Thus neither Slezak nor Cragun disclose an audio cursor individually or in combination. The Examiner Answer's stated reasoning for combining the reference fails for the reasons described above.

C. Re: Rendering Position Determining Means of Claim 21

Appellant asserts that it is not obvious to combine Slezak and Cragun to obtain the claimed features of the current application for the reasons described above.

D. Re: Cursor-Control Means of Claim 21

As described above, neither Slezak nor Cragun disclose a cursor sound source. Furthermore, neither Slezak nor Cragun disclose **a distinctive cursor sound for output from the cursor sound source**. Therefore, neither Slezak nor Cragun individually or in combination disclose a cursor-control means capable of determining a current rendering position in the audio field of a cursor sound source and capable of providing a distinctive cursor sound for output from the cursor sound source.

E. Re: Rendering Means of Claim 21

As described above, neither Slezak nor Cragun disclose a cursor sound source.

F. Re: Cursor Proximity Means of Claim 21

As described above, neither Slezak nor Cragun disclose an audio cursor. Neither Slezak nor Cragun individually or in combination disclose an audio cursor in an audio field with item-representing sound sources. Consequently, neither Slezak nor Cragun disclose comparing rendering positions of an audio cursor with an item-representing sound source. For example, Cragun discloses comparing graphical rendering positions in a graphical field and producing an output sound representative of the comparative graphical positions (see Cragun Col. 7, lines 18-32 and Col. 9, lines 43-63). However, Cragun does not disclose comparison in an audio field of audio rendering positions of an audio cursor and item-representing sound sources.

G. Re: Claims 13, 29, and 45; Claims 17 and 33; Claims 11, 27, and 40

Neither Cragun nor Slezak disclose an audio cursor. Furthermore, neither Cragun nor Slezak disclose multiple different sound elements used together to indicate proximity and separation distance independently. According to claims 13, 29, and 45, a first non-varying element provides indication of general proximity of the audio cursor to an item-representing sound source and a second varying element provides indication of the separation distance between the audio cursor and the item-representing sound source. No such features are explicitly or implicitly described in either Slezak or Cragun.

Regarding claims 17 and 33, neither Cragun nor Slezak disclose indication of a depth of an audio cursor. Neither Cragun nor Slezak disclose a cursor which is movable in a third or depth direction. Cragun and Slezak both use two dimensional graphical displays with cursors movable in two dimensions only.

Regarding claims 11, 27, and 40, Appellant disputes that neither Slezak or Cragun disclose an audible indication having a first component provided by modifying sounds from an item-representing sound source and a second component provided by modifying sounds emanating from the audio cursor. First, neither Slezak nor Cragun disclose an audio cursor. Second, neither Slezak nor Cragun disclose modifying sounds from an audio cursor to indicate changes in distance between the audio cursor and the item-representing sound source or to indicate a direction to or from the item-representing sound source from the audio cursor.

H. Re: Claims 27, 29, and 33

Regarding claim 27, Appellant submits that neither Slezak, Cragun, nor Balabanovic disclose cursor-proximity means that varies one component in correspondence with changes in distance and controlling the other component to be indicative of direction. First, none of the cited references disclose an audio cursor. Second, none of the references disclose an audible indication having a first component provided by modifying sounds from an item-representing sound source and a second component provided by modifying sounds emanating from the audio cursor. Third, Balabanovic describes graphical three dimensional environments and Appellant submits that changes in distance and indications of direction in a graphical environment are very different from those of an audio environment. Thus, the Balabanovic reference **cannot** be obvious to combine with Slezak or Cragun. The Examiner Answer has failed to describe how the references could be combined and Appellant submits that the references **cannot** be combined as suggested. Further, there is no motivation to combine

Balabanovic with Slezak or Cragun because Balabanovic is directed at generating visual representations for audio documents while Slezak and Cragun associate audio sounds with graphical elements on a display.

Regarding claim 29, neither Cragun nor Slezak disclose an audio cursor. Furthermore, neither Cragun nor Slezak disclose multiple different sound elements used together to indicate proximity and separation distance independently. According to claim 29, a first non-varying element provides indication of general proximity of the audio cursor to an item-representing sound source and a second varying element provides indication of the separation distance between the audio cursor and the item-representing sound source. No such features are explicitly or implicitly described in either Slezak or Cragun.

Regarding claim 33, neither Cragun nor Slezak disclose indication of a depth of an audio cursor. Neither Cragun nor Slezak disclose a cursor which is movable in a third or depth direction. Cragun and Slezak both use two dimensional graphical displays with cursors movable in two dimensions only. Though Cragun and Slezak may attempt to provide audio depth cues, neither Cragun nor Slezak do so for a cursor.

I. Re: Claims 4, 7, 11, and 34

Regarding claim 4, Appellant submits that vocal announcement of the contents of a message box as it arrives is **not** the same as using a spoken element to indicate distance between audio elements in an audio environment. Claim 4 is also allowable at least for its dependence on claims 1 and 2 which are both argued as allowable above.

Regarding claim 7, Appellant reasserts that Balabanovic fails to disclose a three dimensional audio environment. Balabanovic teaches that a narration, recorded by an author, can be played back as a user approaches a three dimensional figure. Balabanovic does not describe three dimensional sound. A three dimensional graphical environment does not implicitly include a three dimensional audio environment. Because Balabanovic fails to describe sound dimensionality, Balabanovic **cannot** be said to disclose sound directionality as claimed in claims 4 or 7.

Regarding claim 11, Appellant disputes that the cited portion of Balabanovic describes any change in audio depending on varying levels of distance. Instead, the cited portion of Balabanovic describes graphical proximity indicators associated with an audio segment which may be related to three dimensional graphical figures. Appellant reasserts that the combination of Balabanovic with Slezak or Cragun is not obvious and that none of the cited references individually or in combination disclose the features of the claims.

J. Re: Claims 10, 26, and 42

Regarding claims 10, 26, and 42, McKiel fails to disclose an audio cursor or sounds emanating from a cursor. Instead, McKiel discloses that stopping a mouse over a title bar, pull-down menu, or the like, can result in a vocal representation of the bar or menu. Further, Appellant submits that for the reasons stated above regarding non-obviousness and non-combinability of Slezak and Cragun, McKiel is also not obvious and not combinable with Slezak. Specifically, the McKiel system relies on a user's ability to view a graphical interface and would not be useful in combination with a system for visually impaired users who cannot see the graphical interface.

K. Re: Claims 12, 28, and 44

Regarding claims 12, 28, and 44, Appellant submits that announcement of an icon's property when the object is encountered or provision of an audible beep when an edge of a window is encountered is very different from a coincident cursor sound and item-representing sound. The combination of Rohen with Slezak and Cragun fails to describe coincident cursor and item-representing sounds.

L. Re: Claim 28

None of the cited references disclose coinciding sound sources, at least in terms of direction from a user reference location. That Rohen discloses a beeping sound does not in any way include disclosure of a specific sound to signal a user when two sound sources are coincident.

IV. CONCLUSION

Appellant respectfully submits that the claims on appeal are patentably distinct from the asserted prior art references. Particularly, none of the asserted combinations of references motivates, teaches, or suggests one of ordinary skill in the art within the meaning of 35 U.S.C. § 103(a) to arrive at the presently claimed invention. Appellants contend that Slezak in combination with any of the other cited references fails to teach each and every element of the claimed invention, and furthermore that the references provide no motivation to combine them.

For these reasons, Appellants respectfully request that the Board of Appeals reverse the rejection and remand the case to the Examiner for allowance.

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